सत्यमेव जयते
प्रत्नकीर्तिमपावृणु
अधीक्षण पुरातत्वविद्
SUPERINTENDING ARCHEOLOGIST
ARCHAEOLOGICAL SURVEY OF INDIA
AGRA CIRCLE, 22-THE MALL, AGRA-282001

NOTICE INVITING TENDER

(TWO COVER SYSTEM – Technical & Commercial Bids)

Bids are invited from the qualified & reputed bidders for the "Supply, Installation & Commissioning of Network Video Surveillance along with AutoMesh wireless connectivity at Fatehpur Sikri, A Centrally Protected Monument".

- The details of tender notification can be seen and downloaded from our official websites: www.asi.nic.in **and** http://www.asiagracircle.in
- **Tender No.:3/FTS/37/2014-2015/W**
- **Important dates**

Sale of bid Documents up to:	11/11/2014 up to 15.00hrs
Last Date of submission of bids:	12/11/2014 up to 15.00hrs
Opening of technical bids:	12/11/2014 up to 15.15hrs
Opening of Price Bids	Will be informed to the bidders who have quali in the Cover I Technical Bid (Annexure I (A) (B)) at a later date

- The bid is of two cover system – Cover 1: Technical bid (Annexure I (A) & I (B)) and Cover 2: Price bid (Annexure II)

  Qualified and reputed bidders shall submit Tenders (both Cover - 1 Technical Bid &Cover 2 Price Bid) within stipulated date and time published to Office of the Superintending Archeologist, Agra Circle, Archeological Survey of India, 22 The Mall, Agra 282001 Uttar Pradesh. First Cover (Technical Bid Annexure I (A) & I (B))of Tender will be opened on same day at 03.15 PM in the Office of the Superintending Archeologist, Agra Circle, Archeological Survey of India, 22 The Mall, Agra 282001 Uttar Pradesh in the presence of the bidder(s) or their authorized representative(s), who ever will be present at the scheduled date and time. Opening of Cover-2 (price bid) will be intimated later to the bidders who have qualified in the Cover 1 Technical Bid (Annexure I (A) & I (B))
- The sealed Tender should reach the above mentioned address, latest by 12/11/2014 at 03:00 PM

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- Tenders must be accompanied by Earnest Money Deposit of Rs.4,33,901.00 which should be paid by Demand Draft favoring "Superintending Archeologist, Agra Circle" payable at Agra at the time of submission of bids along with the Technical Bid.

SCOPE OF WORK:

Supply, installation and commissioning of network video surveillance with wireless connectivity atFatehpur Sikri near Agra, Uttar Pradesh. Fatehpur Sikri is a UNESCO world heritage monument under the Archeological Survey of India, Agra Circle, Agra.

The purpose is to provide and increase security to Fatehpur Sikri a UNESCO world heritage monument visited by many tourists around the world. The main objectives are:

1. 24/7 security, vigil and monitoring of the site.
2. Monitor, track, prevent and inform the concerned authorities of any untoward incidents within the monument
3. Supply, install and commission network video surveillance using automesh wireless connectivity within the monument without the use any cables in order to maintain the ambience and aesthetics of the monuments.
4. Supply, install and commission network video surveillance using automesh wireless connectivity within the monument without the use any screws, nut & bolts, drilling or creating any visual and sound impact to the monument

GENERAL CONDITIONS:

1. Preparation and Submission of Tender: The tender should be submitted in two parts i.e. Technical Bid and Price Bids. The Technical Bid and the Price Bids must be sealed by the bidder in two separate covers "Technical Bid super-scribed with tender number" and "Price Bids super-scribed with tender number ". Both Sealed Envelopes should be kept in a main/ bigger envelope super-scribed as with "TENDER NUMBER". Tender not adhering to this condition will be rejected.
2. The Price Bids (Annexure II) of bidders who have qualified in the Technical Bid (Cover I – Annexure I (A) and Annexure I (B)) only will be opened and the rest will be rejected.
3. Earnest Money Deposit: The bidder shall be required to submit refundable amount of

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RS.4,33,901.00 (Rupees Four lakhs thirty three thousand and nine hundred one only) as Earnest Money Deposit (EMD) and a non-refundable tender fee/ processing charges (Rs. 5,000.00 only) by way of demand drafts only. The demand drafts shall be drawn in favour of **"Superintending Archeologist, Agra circle, Agra"** payable Agra U.P. The demand drafts for earnest money deposit must be enclosed in the envelope containing the COVER I technical bid. The EMD of the successful bidder shall be returned after the successful completion of contract / order and for unsuccessful bidder(s) it would be returned after award of the contract. Bid(s) received without demand draft of EMD / Tender Fees will be rejected.

4. Currency: Rate should be quoted in Indian Rupees (INR) on Door Delivery Basis at Fatehpur Sikri Inclusive of all the freight and insurance Charges.

5. The bidder should clearly mention the VAT or CST, Service Tax as applicable clearly in the Price schedule in the Price Bid.

6. Validity: The rates quoted by the bidder must be valid for a period of 180 days from the date of the bid. The overall offer for the assignment and bidder(s) quoted price shall remain unchanged during the period of validity. If the bidder quoted the validity shorter than the required period, the same will be treated as unresponsive and it will be rejected. In case the bidder withdraws, modifies or change their offer during the validity period, bid is liable to be rejected and the earnest money deposit shall be forfeited without assigning any reason thereof. The bidder should also be ready to extend the validity, if required, without changing any terms, conditions etc. of their original tender.

7. Warranty: 03 years Warranty from the date of installation & commissioning to be provided by the bidder.

8. Delivery: All the goods ordered must be delivered within 2 weeks from the date of issuing purchase order. All the aspects of safe delivery and commissioning shall be the exclusive responsibility of the supplier.

9. Payment Term: 50% payment of the total order value shall be released after the successful Supply of the ordered goods/products in accordance with the specification of tender mentioned ANNEXURE I(B) in Technical bid. Balance 50% after successful

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completion of the Installation & Commissioning

10. Bidder shall submit a copy of the tender document and addenda thereto, if any, with each page of this document should be signed and stamped to confirm the acceptance of the entire terms & conditions as mentioned in the tender enquiry document.

11. Signed & stamped compliance sheet of the technical specification of the goods must be enclosed with the Technical Bid along with all technical literature of your product.

12. The bidder must ensure that their installation & commissioning team of people are adequately insured and will be solely responsible for any mishaps or accidents to their team in the site.

13. The bidder agrees to ensure that no damage is caused to the monument by their team during installation & commissioning. Damages caused if any, the bidder agrees to pay for the damages caused as instructed/directed by the Superintending Archeologist.

14. The Superintending Archeologist Agra Circle reserves the right to accept in part or in full or reject any or more quotation(s) without assigning any reasons or cancel the tendering process or and reject all quotations at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder or bidder(s).

15. Contract may be terminated at any time without any prior notice if service of bidder not found satisfactory

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COVER-I (Technical Bid)
ANNEXURE –I (A): Technical Eligibility
(All Conditions Mandatory)

SL No.	Technical Eligibility	Compliance (Yes/No)	Document enclosed (Yes/No)
01	The bidder must have supplied, installed & commissioned a similar single order of not less than Rupees Five (05) Crores at any archeological/ heritage centrally protected monument in India in last 02 financial years.		
02	The bidder must have experience in supply, installation & commissioning similar orders at three (03) Archeological world heritage sites anywhere in India or at any 10 centrally protected monuments in India. Project completion satisfactory certificate should be enclosed with an accumulated order value of more than three (03) crores.		
03	The bidder must produce Manufacturer authorisation from the OEM/Manufacturer if the OEM/ Manufacturer is not the bidder.		
04	The bidder should have a minimum experience of 05 years in sales and after sales support of network surveillance cameras.		
05	The Bidder must be a Pvt. Ltd or a Ltd., Company, registered with Registrar of Companies under the Companies Act, 1956 with an accumulated turnover of not less than 10 crores for the last 03 financial years to be certified by the chartered accountant.		
06	The bidder must have a relevant VAT, Service Tax registration. The copies of the registration certificate to be enclosed.		
07	The bidder must furnish latest VAT clearance certificate.		
08	Copies of balance Sheet, Profit and Loss Account for last three years duly certified by the Charted Accountant of the bidder must be		

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	enclosed.		
09	The bidder must produce a solvency certificate from any nationalized scheduled bank in India for not less than Rs.2.5 Crores.		
10	The bidder should have at-least two OEM/manufacturer certified engineers who must be part of the installation team. Certificate copy to be enclosed.		
11	The bidder must be certified for technical capability, quality of the services and process of execution of similar projects by any electronics specialist government agencies/Undertakings in India for FY 2012-13 & 2013-2014.		
12	Wireless Surveillance Connectivity: The bidder must have an experience of installation and commissioning of Integrated Network Video Surveillance connectivity on a Wireless system without the use of any cables.		
13	The bidder must have an experience of installing fully Integrated Network Video Surveillance (Video Wall, Wireless, PA System, Fire detection system, Access Control) at any protected Heritage Monument with not less than 100 cameras connected with a central command center/control room solution. Performance certificate must be enclosed.		
14	Consortiums and Joint/Group bidding will not be accepted.		
15	The bidder shall not assign or sublet or outsource or sub contract this order/contract or any part thereof to any other agency/Company/Firm either in Private or Govt.		
16	Undertaking by the bidder on Rs.100.00 stamp paper duly notarized stating that the bidder was not disqualified by any Government Department / Agencies and is not blacklisted by any Government agencies in the past under any Act and Rules		
17	Delivery Installation and commissioning: Within		

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	45 days from date of issue of purchase order. Any delays thereafter a penalty of 1.75% of the total order value will be levied every week for maximum of four weeks and if any delay beyond four weeks thereafter, the contract awarded to the bidder stands cancelled and the EMD amount will be forfeited.		
18	Warranty: All products will stand for minimum three years (03) onsite all comprehensive warranty from the date of installation for manufacturing defects. During the warranty period the bidder shall have to provide monthly preventive service calls duly certified by the concerned officer and shall have to attend all breakdown calls within 04 hours from receiving the service/complaint either orally or written.		
19	Dedicated Two (02) onsite support engineers certified by the OEM must be provided during the tenure of the warranty period who will be responsible for smooth functioning, maintenance and handle all support activities on the site.		
20	RMA Support response in 03 Working days with Advance Replacement Policy duly certified by OEM/Manufacturer.		
21	The bidder must be ISO 9001:2008 certified company. Valid certificate must be enclosed.		
22	All the network cameras supplied must be certified for:		
	• UL, CE, EN55022, EN55024, FCC part 15 – Subpart B, VCCI, ICES-003, IP66		
	• The network cameras for 1MP and 2MP supplied must meet the SMTPE video standards: SMTPE 296M (HDTV 720p).		
	• The network cameras supplied must meet the ISO/IEC 14496-10 AVC (H.264) video compression standards.		
	• The network cameras supplied must meet the IEC 60529 (IP66) environmental protection standards.		
	• The network cameras supplied must be manufactured in accordance with the ISO 9001 standards.		

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	• The network cameras supplied must be compliant with 2002/95/RoHS and 2002/96/EG WEEE.		
23	The network cameras supplied must have In-house Processor for Bandwidth Compensation & Edge Analytics.		
24	The network surveillance cameras must support multiple streams with minimum 05 streams on H.264		
25	The network surveillance cameras must have Shutter speed of 1/10000s TO 4s, 1/28000 to 2s, 1/8000 s to 1/6 s).		
26	The network surveillance PTZ cameras must have Tilt angle 220 deg.		
27	The network surveillance cameras must have minimum RAM on processor 512 MB RAM, 128 MB Flash.		
28	The network surveillance cameras must have Onboard Edge storage of up to 64 GB.		
29	All network surveillance cameras supplied must be from one single OEM.		
30	The network surveillance cameras manufactured or assembled in China, Taiwan or Korea will not be accepted.		

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ANNEXURE –I (B)

Detailed Technical Specifications of Network Surveillance Cameras, Software and Display Systems

1. **Outdoor Heavy duty, Pan/Tilt, Day and Night network surveillance camera with the following specifications.**

(*Mandatory, # Desirable)

Feature	Specification Minimum Required	Compliance (Yes/No)
Image Sensor #	1/3" Progressive Scan CCD/CMOS (with IR cut filter)	
Lens*	30X (HD) optical Zoom(4.4-132mm, F 1.4-4.6) or better	
Digital Zoom*	12x or better	
Resolution*	Up to 1280x720, @ 25 fps, Should support PAL Indian standard	
Frame rate*	H.264: Up to 25 fps selectable	
Focus*	Automatic	
Horizontal Angle*	62.9^0– 2^0 or better	
Minimum Illumination*	Color 0.5lux(1/30 sec), BW 0.04 lux(1/30 sec)@30IRE	
Pan*	360^0 endless Continuous	
Tilt*	220^0 or better	
Pan/Tilt*	Preset Speed: Pan & Tilt 0.5^0– 450^0/ sec or better	
Day / Night Functions*	Day / Night, Automatic switch over from Color to B/W	
Network Interface	10/100 base TX, RJ 45	
Mechanical IR cut filter #	Yes	
Preset*	256 preset positions minimum with Control queue and On-screen directional indicator	
Shutter time*	1/10000 to 1/4secs or better	
Video	H.264 (MPEG-4 Part 10/AVC)	

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Compression #		
Video streaming*	Multi-stream with variable/ configurable frame rate &bit rate for preview and recording H.264 /MJPEG Video	
Audio Streaming*	Two-way	
Alarm inputs/ Outputs*	Minimum configurable 8 input or output	
Intelligence*	Built-in hardware, intelligent motion detection, Auto Tracking, Shock detection	
Image settings*	Wide dynamic range (WDR), electronic image stabilization (EIS), Manual shutter time, compression, colour, brightness, sharpness, white Balance, exposure control, exposure zones, backlight compensation ,Text and Image overlay with atleast 30 privacy mask zone	
Security*	Password protection, IP addresses filtering, ,User access logs.	
Supported protocols*	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS,DHCP,HTTPS,NTP,SSL,TLS,SRTP,SSH,QoS	
Users*	5 or more simultaneous Users/Unlimited users in multicast mode.	
Power*	230V AC +/- 5% , 50 Hz, Suitable Power adapter, POE+	
Mount	Pole/Wall mount	
Casing*	IP66 - rated casing, Nema 4X with sunshield, IK-10 RATED metal Vandal proof housing	
Certifications*	UL, CE, FCC.& EN	
Operating Temperature #	-40°C to + 50°C or better	
Accessories #	Power supply, other mountings and connector kits, Installation Guide, CD with installation tools, Recording software and User's Manual, Installation, Management tools, Service manual and QC test report.	
Compatible standard and Protocol*	ONVIF Profile S Support	
Local storage*	SD/SDHC/SDXC, 64Gb – speed class 10	
Defog *	Automatic defog functionality	

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Open Platform*	Vendor to provide open API for future integration	

2. Outdoor Fixed Night vision Network video surveillance camera with inbuilt IR Illuminators

(*Mandatory, # Desirable)

Feature	Specification Minimum Required	Compliance (Yes/No)
Image Sensor #	1/2.9" Progressive Scan CCD/CMOS (with IR cut filter)	
Lens *	18X Optical Zoom 4.7 to 84.6mm(F1.6-2.8) automatic day/night or better	
Digital Zoom *	12x or better	
IR Illuminators	IR LED with Wavelength 850nm or better with adjustable angle and intensity with 15mts coverage in wide and 40mts tele mode	
Resolution *	Up to 1920x1080, @ 25 fps, Should support PAL Indian standard	
Frame rate *	H.264: Up to 25 /30 fps selectable	
Focus *	Auto	
Horizontal Angle *	59° to 4° or better	
Minimum Illumination *	Color: 0.5 lux , B/W: 0.04 lux & 0 Lux IR Illuminator ON or better	
Day / Night Functions #	Day / Night, Automatic switch over from Colour to B/W	
Network Interface #	10/100 base TX, RJ 45	

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Mechanical IR cut filter *	Yes	
Shutter time #	1/28000- 2secs or better	
Video Compression #	H.264 (MPEG-4 Part 10/AVC)	
Video streaming *	Multi-stream with variable/ configurable frame rate & bit rate for preview and recording H.264/MJPEG Video	
Audio Streaming *	Two-way	
Alarm inputs/ Outputs *	Minimum configurable 2 input /outputs	
Intelligence *	Built-in hardware, intelligent motion detection, Audio Detection	
Image settings *	Wide dynamic range (WDR), Manual shutter time, compression, colour, brightness, sharpness, white Balance, exposure control, exposure zones, backlight compensation, Text and Image overlay, 3D Privacy masking	
Security *	Password protection, IP addresses filtering, User access logs	
Supported protocols #	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS,DHCP,HTTPS,NTP,SSL,TLS,SRTP,SSH,QoS	
Users *	5 or more simultaneous Users/Unlimited users in multicast mode.	
Power *	230V AC +/- 5% , 50 Hz, Suitable Power	

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	adapter, POE+	
Mount #	Pole/Wall bracket	
Casing *	IP66 - rated casing with sunshield, NEMA-4X IMPACT resistant housing	
Certifications *	UL, CE, FCC & EN	
Operating Temperature *	-40°C to + 50°C or better	
Accessories #	Power supply, other mountings and connector kits, Installation Guide, CD with installation tools, Recording software and User's Manual, Installation, Management tools, Service manual and QC test report.	
Compatible standard and Protocol *	ONVIF Profile S Support	
Local storage *	Micro SD/SDHC/SDXC support up to 64Gb – speed class 10	
OPEN Platform *	Vendor to provide open API in case of future integration	

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3. Outdoor Fixed Dome network camera with two way Audio and inbuilt Illumination LED

(*Mandatory, # Desirable)

Feature	Specification Minimum Required	Compliance (Yes/No)
Image Sensor #	1/4" Progressive Scan CCD/CMOS	
Lens *	2.9mm F2.0 or better	
Illuminator*	IR White LED in built	
Resolution *	1280x800(PAL) or better	
Frame rate #	H.264& Motion JPEG Up to 30 fps selectable	
Focus *	Fixed	
Pan /Tilt/Zoom #	Digital PTZ, Guard tour, preset positions	
Horizontal Angle of view *	84^0 or better	
Minimum Illumination *	Color: 1.2-10000 lux & 0Lux when Illuminator LED ON	
PIR Sensor *	Passive Infrared(PIR) motion sensor with configurable sensitivity with range of upto 6mts	
Mechanical IR cut filter	YES	
Network Interface *	10 Base T/100 Base TX RJ 45	
Shutter Time *	1/24500 – 1/6s or better	
Video Compression #	H.264 (MPEG-4 Part 10/AVC) main profile and Motion JPEG	
Video streaming *	Multi-stream with variable/ configurable frame rate & constant and variable bit rate for preview and recording H.264 /MJPEG Video	
Audio Streaming *	Two-way with built in Microphone and speaker	
Processor Memory*	256 MB , 128 Flash	
Alarm inputs/ outputs #	Minimum 1 configurable inputs& 1 outputs	
Audio Compression #	AAC-LC8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 Hz configurable bit rate	

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Intelligence *	Built-in hardware motion detection, Tamper Alarm, Audio detection	
Image settings *	Color, brightness, sharpness, white balance, exposure control, exposure zones, backlight compensation, Compression, Text and Image overlay, Privacy masking	
Security *	Password protection, IP addresses filtering, User access logs, HTTPs encryption	
Supported protocols #	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS,DHCP,HTTPS,NTP,RTSP, QoS, Bonjour	
Users *	5 or more simultaneous Users/Unlimited users in multicast mode.	
Power #	POE IEEE 802.3af Class 2	
Casing	IPP66 and NEMA 4X –rated IK10 impact resistant Aluminium casing and Polycarbonate cover and dehumidifying membrane	
Certifications *	UL, CE, FCC, VCCI & EN	
Operating Temperature *	30°C to + 50°C or better, Humidity upto 100% RH	
Accessories #	Power supply, other mounting accessories and connector kits, Installation Guide, CD with installation tools, recording software and User's Manual, installation and management tools.	
Compatible standard and Protocol *	ONVIF support	
Edge storage #	Support for recording to network share	
OPEN Platform *	Vendor to provide open API in case of future integration	

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4. Multicast streaming applications (*Mandatory, # Desirable)

Specification Minimum Required *	Compliance (Yes/No)
Network video management multi streaming multicast license capable of up to 10 streams or equivalent.	

5. Network Video surveillance wireless connectivity *

Specification Minimum Required	Compliance (Yes/No)
AutoMesh Protocol, Security and Encryption: WPA/WPA2 Wireless encryption, 128 bit / 256 bit end-to-end AES, MAC address filtering, Digitally signed firmware files, Digital certificates on nodes, Wireless Interface: IEEE 802.11a/b/g/n ad hoc, Transmit power: up to 400 mW for 2.4/5 Ghz radio & 500 mW for 900 Mhz radio, Frequency ranges: 902 – 928 Mhz 2.412 – 2.483 GHz , 4.94 – 4.99 GHz, 5.25 – 5.35 GHz, 5.470 – 5.725 GHz, 5.725 – 5.825 GHz Receive sensitivity (typical), 900 Mhz, DSSS, 1 Mbps: -94 dBm, 11 Mbps: -89 dBm, 900 Mhz, OFDM, 6 Mbps: -91 dBm, 54 Mbps: -71 dBm, 2.4 GHz, DSSS, 1 Mbps: -95 dBm, 11 Mbps: -88 dBm 2.4 GHz, OFDM, 6 Mbps: -90 dBm, 54 Mbps: -73 dBm, 5 GHz, 6 Mbps: -90 dBm, 54 Mbps: -73 dBm, Dynamic Frequency Selection (DFS), Transmit Power Control (TPC), Network Ports: Three GigE 10/100/1000 Mbps, Ethernet ports with weatherproof, connectors, LED activity indicator, IEEE 802.3, 802.3u compliant, CSMA/CD 10/100 autosense, Ports 2, 3 PSE Power over Ethernet per 802.3af, Enclosure: Cast aluminum NEMA-4X/IP66, enclosure, Six type-N female antenna connectors, Two weatherproof power connectors, Three weatherproof Ethernet connectors, Outdoor MIMO-802.11n capable, Dual Radio, Tri Band Spectrum 5 GHz, 400 mW, Wireless Mesh Node. 5 meter North America AC power cable, six 2.4 GHz 5 dBi antennas, six 5 GHz 5 dBi antennas, 3 RJ45 weatherized ethernet connectors, 20 degrees patch antenna 3x3 MIMO, 4.9 – 6.1 capable. 120 degree sector antenna, BSA MIMO 3x3 , 120 deg, 4.9-6.1 GHz, 3 x 15dBi gain. Antenna Cable	

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Assembly, 1.5 meter LMR-400 w/ Integrated lightning suppressor N-type connector	

6. Mounting Structures * (*Mandatory, # Desirable)

Specification Minimum Required	**Compliance (Yes/No)**
PENDANT KIT to mount the Fixed Dome Network Camera on Brackets or on standard 1.5" NPT threaded brackets. White. Pole Bracket. For use with PTZ Dome Network Camera & Fixed network cameras	

7. Control Room & Storage for Network Video Surveillance *

Specification Minimum Required	**Compliance (Yes/No)**
Providing Network video management surveillance software with Central management, system control on 64 bit recording server, versatile rule engine, edge storage, alarm manager, bookmarking Video analytics with live and remote monitoring, recording, tamper and motion detection alarm triggers, log reports, auto voice alert, Tripwire, Trespass, Motion Detection, Multi Region Analytics, Object Classification, Illegal Parking Detection, Left Out Baggage Detection, Loitering Detection, Crowd Detection, Video Stitching, Video Smoke Detection, Smart Auto PTZ, Video Stabilization, People Counting. 12MB Cache, minimum 3.0 GHz processor, RAM: Minimum 4 GB. Gigabit Ethernet Card, HDD 10TB, Intel Core i7 with 2 GB graphic card, With included all other hardware accessories necessary to view minimum of 30 cameras per workstation and 46 " Diagonal , thin bezel, 1920 x 1080 resolution , Birghtness 350 nits , Contrast Ratio 5000:1 , Aspect Ratio 16:9 ,Viewing Angle H/V: 178° / 178° ,8 bit - 16.7M Display Colour , Plug and Play ,, AC 100 - 240 V~ (+/- 10 %), 50/60 Hz, Operational 24/7 Surveillance needs , Smart Scheduling , Smart F/W Update, Remote controlling through RJ45 LAN MDC feature, RS232C daisy chain MDC with necessary mounting bracket with other hardware required.	

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8. Network power * (*Mandatory, # Desirable)

Specification Minimum Required	Compliance (Yes/No)
Network Power 1000 Wp Direct Photovoltaic Power online back for Network video surveillance with 24V 150 Ah@C10 x 12-110 Deep Discharge battery pack connectivity with networking power backup Direct integration with network video surveillance cameras	

COVER-II (Price Bid)

ANNEXURE II: Bill of Materials

SL NO	SpecificationAs Per (Annexure I(B))	QTY	UNIT RATE	Amount	VAT/CST/ Service tax	Sub-total
		(a)	(b)	{(a)*(b)}	(c)	{(a)*(b)}+(c)
01	Outdoor Heavy duty, Pan/Tilt, Day and Night network surveillance camera	07				
02	Outdoor Fixed Night vision Network video surveillance camera with inbuilt IR Illuminators	09				
03	Camera- Outdoor Fixed Dome network camera with two way Audio and inbuilt Illumination LED	01				

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04	Multicast streaming applications	17				
05	Network Video surveillance wireless connectivity	20				
06	Mounting Structures	17				
07	Control & Storage for Network Video Surveillance	01				
08	Network power	17				
09	Installation					
					Grand Total	

In Words:

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DETAILED SPECIFICATIONS OF NETWORK VIDEO SURVEILLANCE & AUTOMESH WIRELESS SYSTEMS AT FATEHPUR SIKRI

Sl. No	Description of Items		Quantity	Rate	Amount
1	Network video surveillance camera Outdoor Heavy duty, Pan/Tilt, Day and Night with the following specifications		7		
1.1	Image Sensor:	1/3" Progressive Scan CCD/CMOS (with IR cut filter)			
1.2	Lens:	30X (HD) optical Zoom(4.4-132mm, F 1.4-4.6)			
		or better			
1.3	Digital Zoom	12x or better			
1.4	Resolution:	Up to 1280x720, @ 25 fps, Should support PAL Indian standard			
1.5	Frame rate:	H.264: Up to 25 fps selectable			
1.6	Focus:	Automatic			
1.7	Horizontal Angle:	$62.9^0 - 2^0$ or better			
1.8	Minimum Illumination:	Color 0.5lux(1/30 sec), BW 0.04 lux(1/30 sec)			
1.9	Pan	360^0 endless			
1.1	Tilt:	220^0 or better			
1.11	Pan/Tilt:	Preset Speed: Pan & Tilt $0.5^0 - 450^0$/ sec or better			
1.12	Day / Night Functions	Day / Night, Automatic switch over from Colour to B/W			
1.13	Network Interface:	10/100 base TX, RJ 45			

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1.14	**Mechanical IR cut filter**:	Yes			
1.15	**Preset:**	256 preset positions minimum with Control queue and On-screen directional indicator			
1.16	**Shutter time**	1/10000 to 1/4secs or better			
1.17	**Video Compression :**	H.264 (MPEG-4 Part 10/AVC)			
1.18	**Video streaming:**	Multi-stream with variable/ configurable frame rate &bit rate for preview and recording H.264 /MJPEG Video			
1.19	**Audio Streaming:**	Two-way			
1.2	**Alarm inputs/ Outputs**:	Minimum configurable 8 input or output			
1.21	**Intelligence**	Built-in hardware, intelligent motion detection, Auto Tracking, Shock detection			
1.22	**Image settings:**	Wide dynamic range (WDR), electronic image stabilization (EIS), Manual shutter time, compression, colour, brightness, sharpness, white Balance, exposure control, exposure zones, backlight compensation ,Text and Image overlay with atleast 30 privacy mask zone			
1.23	**Security:**	Password protection, IP addresses filtering, ,User access logs.			
1.24	**Supported protocols:**	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS, DHCP,			

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		HTTPS,NTP,SSL,TLS,SRTP,SSH,QoS			
1.25	**Users:**	5 or more simultaneous Users/Unlimited users in multicast mode.			
1.26	**Power:**	230V AC +/- 5% , 50 Hz, Suitable Power adapter, POE+			
1.27	**Mount:**	Pole/Wall mount			
1.28	**Casing:**	IP66 - rated casing, Nema 4X with sunshield, IK-10 RATEDmetal Vandal proof housing			
1.29	**Certifications :**	UL, CE, FCC.& EN			
1.3	**Operating Temperature:**	-40°C to + 50°C or better			
1.31	**Accessories:**	Power supply, other mountings and connector kits, Installation Guide, CD with installation tools, Recording software and User's Manual, Installation, Management tools, Service manual and QC test report.			
1.32	**Compatible standard and Protocol**	ONVIF Profile S Support			
1.33	**Local storage**	SD/SDHC/SDXC, 64Gb – speed class 10			
1.34	**Defog**	Automatic defog functionality			

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1.35	**OPEN Platform**	Vendor to provide open API for future integration			
2	**Outdoor Fixed Night vision Network video surveillance camera with inbuilt IR Illuminators with following specifications**		9		
2.1	**Image Sensor:**	1/2.9" Progressive Scan CCD/CMOS (with IR cut filter)			
2.2	**Lens:**	18X Optical Zoom 4.7 to 84.6mm(F1.6-2.8) automatic day/night or better			
2.3	**Digital Zoom**	12x or better			
2.4	**IR Illuminators:**	IR LED with Wavelength 850nm or better with adjustable angle and intensity with 15mts coverage in wide and 40mts tele mode			
2.5	**Resolution:**	Up to 1920x1080, @ 25 fps, Should support PAL Indian standard			
2.6	**Frame rate:**	H.264: Up to 25 /30 fps selectable			
2.7	**Focus:**	Auto			
2.8	**Horizontal Angle:**	59° to 4° or better			
2.9	**Minimum Illumination:**	Color: 0.5 lux , B/W: 0.04 lux & 0 Lux IR Illuminator ON or better			
2.1	**Day / Night Functions**	Day / Night, Automatic switch over from Colour to B/W			
2.11	**Network Interface:**	10/100 base TX, RJ 45			
2.12	**Mechanical IR cut filter:**	Yes			
2.13	**Shutter time**	1/28000- 2secs or better			

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2.14	**Video Compression :**	H.264 (MPEG-4 Part 10/AVC)			
2.15	**Video streaming:**	Multi-stream with variable/ configurable frame rate & bit rate for preview and recording H.264/MJPEG Video			
2.16	**Audio Streaming:**	Two-way			
2.17	**Alarm inputs/ Outputs:**	Minimum configurable 2 input /outputs			
2.18	**Intelligence**	Built-in hardware, intelligent motion detection, Audio Detection			
2.19	**Image settings:**	Wide dynamic range (WDR), Manual shutter time, compression, colour, brightness, sharpness, white Balance, exposure control, exposure zones, backlight compensation, Text and Image overlay, 3D Privacy masking			
2.2	**Security:**	Password protection, IP addresses filtering, User access logs			
2.21	**Supported protocols:**	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS,DHCP,HTTPS,NTP,SSL,TLS ,SRTP,SSH,QoS			
2.22	**Users:**	5 or more simultaneous Users/Unlimited users in multicast mode.			
2.23	**Power:**	230V AC +/- 5% , 50 Hz, Suitable Power adapter, POE+			

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2.24	**Mount:**	Pole/Wall bracket			
2.25	**Casing:**	IP66 - rated casing with sunshield, NEMA-4X IMPACT resistant housing			
2.26	**Certifications :**	UL, CE, FCC & EN			
2.27	**Operating Temperature:**	-40°C to + 50°C or better			
2.28	**Accessories:**	Power supply, other mountings and connector kits, Installation Guide, CD with installation tools, Recording software and User's Manual, Installation, Management tools, Service manual and QC test report.			
3.29	**Compatible standard and Protocol**	ONVIF Profile S Support			
2.3	**Local storage**	Micro SD/SDHC/SDXC support up to 64Gb – speed class 10			
2.31	**OPEN Platform**	Vendor to provide open API incase of future integration			
3	**Outdoor Fixed network camera with two way Audio and inbuilt Illumination LED**		1		
3.1	**Image Sensor:**	1/4" Progressive Scan CCD/CMOS			
3.2	**Lens:**	2.9mm F2.0 or better			
3.3	**Illuminator**	IR White LED in built			
3.4	**Resolution:**	1280x800(PAL) or better			
3.5	**Frame rate:**	H.264& Motion JPEG Up to 30 fps selectable			
3.6	**Focus:**	Fixed			

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3.7	**Pan /Tilt/Zoom**	Digital PTZ, Guard tour, preset positions			
3.8	**Horizontal Angle of view:**	84^0 or better			
3.9	**Minimum Illumination:**	Color: 1.2-10000 lux &			
		0Lux when Illuminator LED ON			
3.1	**PIR Sensor:**	Passive Infrared(PIR) motion sensor with configurable sensitivity with range of upto 6mts			
3.11	**Network Interface:**	10 Base T/100 Base TX RJ 45			
3.12	**Shutter Time:**	1/24500 – 1/6s or better			
3.13	**Video Compression :**	H.264 (MPEG-4 Part 10/AVC) main profile and Motion JPEG			
3.14	**Video streaming:**	Multi-stream with variable/ configurable frame rate & constant and variable bit rate for preview and recording H.264 /MJPEG Video			
3.15	**Audio Streaming:**	Two-way with built in Microphone and speaker			
3.16	**Alarm inputs/ outputs:**	Minimum 1 configurable inputs& 1 outputs			
3.17	**Audio Compression**	AAC-LC8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 Hz configurable bit rate			
3.18	**Intelligence**	Built-in hardware motion detection, Tamper Alarm, Audio detection			

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3.19	**Image settings:**	Color, brightness, sharpness, white balance, exposure control, exposure zones, backlight compensation, Compression, Text and Image overlay, Privacy masking			
3.2	**Security:**	Password protection, IP addresses filtering, User access logs, HTTPs encryption			
3.21	**Supported protocols:**	IPv4/v6, HTTP, QoS, FTP, SMTP, UPnP, SNMP, RTP, TCP, UDP, IGMP, RTCP, ICMP, SOCKS,DHCP,HTTPS,NTP,RTSP, QoS, Bonjour			
3.22	**Users**:	5 or more simultaneous Users/Unlimited users in multicast mode.			
3.23	**Power**:	POE IEEE 802.3af Class 2			
3.24	**Casing:**	Aluminium and Polycarbonate			
3.25	**Certifications**:	UL, CE, FCC, VCCI & EN			
3.26	**Operating Temperature**:	0°C to + 40°C or better, Humidity upto 80% RH			
3.27	**Accessories:**	Power supply, other mounting accessories and connector kits, Installation Guide, CD with installation tools, recording software and User's Manual, installation and management tools.			
3.28	**Compatible standard and Protocol**	ONVIF support			

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3.29	**Edge storage**	Support for recording to network share			
3.3	**OPEN Platform**	Vendor to provide open API incase of future integration			
4	**Network video surveillance camera Multicast streaming applications**	Network video management multi streaming multicast license capable of up to 10 streams or equivalent.	17		
5	**Auto Mesh Network Video surveillance wireless connectivity**	Auto Mesh Protocol, Security and Encryption: WPA/WPA2 Wireless encryption, 128 bit / 256 bit end-to-end AES, MAC address filtering, Digitally signed firmware files, Digital certificates on nodes, Wireless Interface: IEEE 802.11a/b/g/n ad hoc, Transmit power: up to 400 mW for 2.4/5 Ghz radio & 500 mW for 900 Mhz radio, Frequency ranges: 902 – 928 Mhz 2.412 – 2.483 GHz , 4.94 – 4.99 GHz, 5.25 – 5.35 GHz, 5.470 – 5.725 GHz, 5.725 – 5.825 GHz Receive sensitivity (typical), 900 Mhz, DSSS, 1 Mbps: -94 dBm, 11 Mbps: -89 dBm, 900 Mhz, OFDM, 6 Mbps: -91 dBm, 54 Mbps: -71 dBm, 2.4 GHz, DSSS, 1 Mbps: -95 dBm, 11 Mbps: -88 dBm 2.4 GHz, OFDM, 6 Mbps: -90 dBm, 54 Mbps: -73 dBm, 5 GHz, 6 Mbps: -90 dBm, 54 Mbps: -73 dBm, Dynamic Frequency Selection (DFS), Transmit Power Control (TPC),	20		

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		Network Ports: Three GigE 10/100/1000 Mbps, Ethernet ports with weatherproof, connectors, LED activity indicator, IEEE 802.3, 802.3u compliant, CSMA/CD 10/100 autosense, Ports 2, 3 PSE Power over Ethernet per 802.3af, Enclosure: Cast aluminum NEMA-4X/IP66, enclosure, Six type-N female antenna connectors, Two weatherproof power connectors, Three weatherproof Ethernet connectors, Outdoor MIMO-802.11n capable, Dual Radio, Tri Band Spectrum 5 GHz, 400 mW, Wireless Mesh Node. 5 meter North America AC power cable, six 2.4 GHz 5 dBi antennas, six 5 GHz 5 dBi antennas, 3 RJ45 weatherized ethernet connectors, 20 degrees patch antenna 3x3 MIMO, 4.9 – 6.1 capable. 120 degree sector antenna, BSA MIMO 3x3 , 120 deg, 4.9-6.1 GHz, 3 x 15dBi gain. Antenna Cable Assembly, 1.5 meter LMR-400 w/ Integrated lightning suppressor N-type connector.			
6	**Mounting Structures**	PENDANT KIT to mount the Fixed Dome Network Camera on Brackets or on standard 1.5" NPT threaded brackets. White. Pole Bracket. For use with PTZ Dome Network Camera & Fixed network cameras	17		

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7	**Control & Storage for Network Video Surveillance**	Providing Network video management surveillance software with Central management, system control on 64 bit recording server, versatile rule engine, edge storage, alarm manager, bookmarking Video analytics with live and remote monitoring, recording, tamper and motion detection alarm triggers, log reports, auto voice alert, Tripwire, Trespass, Motion Detection, Multi Region Analytics, Object Classification, Illegal Parking Detection, Left Out Baggage Detection, Loitering Detection, Crowd Detection, Video Stitching, Video Smoke Detection, Smart Auto PTZ, Video Stabilization, People Counting. 12MB Cache, minimum 3.0 GHz processor, RAM: Minimum 4 GB. Gigabit Ethernet Card, HDD 10TB, Intel Core i7 with 2 GB graphic card, With included all other hardware accessories necessary to view minimum of 30 cameras per workstation and 46 " Diagonal , thin bezel, 1920 x 1080 resolution , Birghtness 350 nits , Contrast Ratio 5000:1 , Aspect Ratio 16:9 ,Viewing Angle H/V: 178° / 178° ,8 bit - 16.7M Display Colour , Plug and Play ,, AC 100 - 240 V~ (+/- 10 %), 50/60 Hz,	1		

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		Operational 24/7 Surveillance needs , Smart Scheduling , Smart F/W Update, Remote controlling through RJ45 LAN MDC feature, RS232C daisy chain MDC with necessary mounting bracket with other hardware required.			
8	**Network power-on**	Network Power-ON 1000 Wp Direct Photovoltaic Power online back for Network video surveillance with 24V 150 Ah@C10 x 12-110 Deep Discharge battery pack connectivity with networking power backup Direct integration with network video surveillance cameras.	17		
9	Installation charges		01 job		
	Grand Total				

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